

Cavendish Laboratory,

Cambridge.

September 20. 1927

Dear Dr Goudsmit

On my return to England from the Volta Meeting at Como, I received your letter about your work on Bismuth. I had seen Professor Zeeman at Como and he had spoken to me on this matter. I thank you for the trouble you have taken in writing to me so fully about the present state of your experiments and deductions. I have received also the paper of yours and Back in the *Zeit. f. Phys.* this morning.

I am naturally very interested in any method that will throw light on the constitution of the nucleus, and in connection with my theory of the origin of the α rays which appeared in the *Phil Mag.* for September it would be of special interest to me if methods could be devised for finding the magnetic state of the radioactive nuclei. You will notice I made a brief reference to your work in the paper.

I congratulate you on your success in working out the superfine structure of the bismuth spectrum, and I appreciate also the difficulty of drawing clear cut deductions of the magnetic state of the nucleus from it.

I shall be glad to hear if at any time you are able to go further in these directions.

Yours sincerely

E. Rutherford.

MSS
002119A
SCDIRB

per/11/NTT